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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/629,855	07/30/2003	Timothy A. Johnson	2540-0664	6159

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EXAMINER	
VO, TUNG T	

ART UNIT	PAPER NUMBER
2621	

MAIL DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/629,855	JOHNSON ET AL.	
	Examiner	Art Unit	
	Tung Vo	2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *03* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-12* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-12* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *12 December 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Allowable Subject Matter

1. The indicated allowability of claims 1-12 dated 03/26/08 is withdrawn in view of the newly discovered reference(s) to Ohtani et al. (US 6,470,050) and Koga et al. (US 6,661,838). Rejections based on the newly cited reference(s) follow.

Claim Rejections - 35 USC § 101

1. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

2. Claims 1-6 are rejected under 35 U.S.C. 101 as not falling within one of the four statutory categories of invention. Supreme Court precedent and recent Federal Circuit decisions indicate that a statutory "process" under 35 U.S.C. 101 must (1) be tied to another statutory category (such as a particular apparatus), or (2) transform underlying subject matter (such as an article or material) to a different state or thing. While the instant claim(s) recite a series of steps or acts to be performed, the claim(s) neither transform underlying subject matter nor positively tie to another statutory category that accomplishes the claimed method steps, and therefore do not qualify as a statutory process. For example there is no device recited within the claims to accomplish an inventive step(s) of the method claimed.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohtani et al. (US 6,470,050).

Re claim 7, Ohtani teaches a video encoder (fig. 12) comprising: a pixel value analyzer (70 of fig. 12, see also fig. 10) analyzing pixel values within a current block of a frame of video frame information to determine pixel value frame changes in pixel values between frames;

a comparator (71 and 72 of fig. 10, note the change point detection unit and accumulation unit would obviously be combined to make a comparator) testing: (i) whether a change in pixel value determined by the pixel value analyzer for any one of the pixels in the current block exceeds a first override threshold (71 of fig. 10, fig. 9(a), S4 of fig. 11), and (ii) whether a second threshold number of pixels in the current block changed in pixel value by at least a third noise threshold (72 of fig. 10, fig. 9(b), and

a transmitter (74 of fig. 10, fig. 9(c), S8 of fig. 11) transmitting information identifying the pixel values within the block if the comparator determines either condition b.i. or condition b.ii. is true (motion vectors are transmitted, which indicates change in frame).

It is noted that Ohtani does not particularly teach wherein the second threshold is at least two as claimed.

However, Ohtani teaches that four pixel units would obviously encompass at least two pixels, S6 of fig. 11; therefore, one of ordinary skill in the art would obviously use the teaching of Ohtani to modify the second threshold number of pixels in the current block that is at least two for the video encoder having a lower system cost can be provided.

Re claim 8, Ohtani further teaches wherein the transmitter communicates a no change condition in the current block if both conditions of steps b.i. and b.ii. are not true (S4 and S6 of fig. 11, No).

Re claim 9, Ohtani further teaches wherein the communicated no change condition comprises a communication of nothing regarding the current block (S4 and S6 of fig. 11).

Re claim 10, Ohtani further teaches wherein said second threshold is equal to the number of pixels in the current block (col. 13, lines 15-19, a prescribed number of pixels would obviously be the number of pixels in current block).

Re claim 11, Ohtani further teaches wherein said third noise threshold is greater than one (number of pixels would be more than one).

Re claim 12, Ohtani further teaches wherein the transmitter further comprises a compressor for compressing the pixel values within the block prior to transmission over a communication channel (220 of fig. 12).

Re claims 1-2 and 4-6, see analysis in claims 7-12.

Re claim 3, Ohtani further teaches the communicated no change condition comprises communicating nothing regarding the current block (S4 and S6 of fig. 11, NO); and decoding the video information by writing current blocks for which nothing is

communicated as unchanged compared to a corresponding block in a previous frame (230 of fig. 12, image reproduction is decoding process).

4. Claims 1-2, 4-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koga et al. (US 6,661,838).

Re claim 1, Koga teaches a method of communicating video information as the video information changes from one frame to another (12 of fig. 4), comprising:

a. determining changes in pixel values within a current block of a frame of the video information (S202 of fig. 7);

b. testing: (i) whether a change in pixel value determined in for any one of the pixels in the current block exceeds a first override threshold (S203 of fig. 7), and

(ii) whether a second threshold number of pixels in the current block changed in pixel value by at least a third noise threshold, wherein the second threshold is at least two (S204 and S205 of fig. 7).

It is noted that Koga teaches the increase number of change pixels by one; therefore, one of ordinary skill in the art would obviously increase the number of change pixels to at least two pixels to accurately detect an image change without being affected by change areas (erroneously detected small areas dispersing randomly, in particular) erroneously detected because of flickering of a light source or mixing of noise in a photoelectric scanning unit, an electronic circuit unit.

Koga further teaches c. if the test of either step b.i. or step b.ii. is true, then communicating information identifying the pixel values within the block (S203 and S205 of fig. 7; YES).

Re claim 2, Koga further teaches d. if both conditions of steps b.i. and b.ii. are not true, then communicating a no change condition in the current block (S203 and S205 of fig. 7, NO, and S206 of fig. 7, YES).

Re claim 4, Koga further teaches wherein said second threshold is equal to the number of pixels in the current block (S204 of fig. 7).

Re claim 5, Koga further teaches wherein said third noise threshold is greater than one (S205 of fig. 7, Value 2).

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Takeda et al. (US 6,584,155) discloses a method and system for estimating motion vector.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tung Vo whose telephone number is 571-272-7340. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mehrdad Dastouri can be reached on 571-272-7418. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Tung Vo/

Primary Examiner, Art Unit 2621

/Mehrdad Dastouri/

Supervisory Patent Examiner, Art Unit 2621